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Preface to Part V
Distributed Networks

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Distributed networks play a vital role as part of the technology for the functioning of modern society. Their applications to different domains of interest have been growing at an ever-increasing pace, and are likely to stay that way for a near future. Coordination, cooperation, collaboration, and (wireless) communication are essential elements for successful operation of distributed networks and require sophisticated engineering approaches to develop, test and deploy applications. These networks are inherently complex to design, develop and operate owing to these attributes. Contributions in that respect that facilitate or make it easier to prototype, deploy and operate distributed networks are in need, and papers presented in this section strive to address this specific need.

Key highlights and aspects for contributions reported in this section entail wireless sensor networks, wireless communication protocols, secure computing and communications, and pattern discovery in non-structured online data as in social media as follows.

Wireless sensor networks: Serpen and Li present their findings to model, simulate and assess the time complexity of large-scale wireless sensor networks with the TOSSIM emulator. Challoo and Ozcelik discuss a comparative evaluation of leading wireless short-range communication technologies and protocols including Wi-Fi, Bluetooth and ZigBee for co-existence since they occupy the same frequency spectrum.

Pattern discovery in non-structured data: Taylor et al. discuss their study of unstructured data as typically found in online blogs (Facebook, Twitter, etc.) to determine if the discussion contained by the forum is “of interest” using attributes pertaining to vocabulary use, phonetic features, and syntactic characteristics among others.

Secure computing: Cremeans, Lakshmivarahan and Dhall propose an approximation algorithm for interdependent security among interacting agents in a distributed computing environment. Purgason and Hibler present a user login validation methodology based on key interval time biometrics to grant access to a computing system.

As conference co-chair for Part V, I am pleased to be able to present each of these valuable contributions for the reader’s benefit and thank the authors.

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